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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/781,533 | 02/17/2004 | Koshi Hatakeyama | 1232-5286 | 2432 |
| 27123 | 7590 | 06/13/2005 | EXAMINER | |
| MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101 | | | SEVER, ANDREW T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2851 | |

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/781,533 | Applicant(s) HATAKEYAMA ET AL. | |
| | Examiner Andrew T. Sever | Art Unit 2851 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 3,6,7 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of species 1 (claims 1, 2, 4, 5, and 8-12) in the reply filed on 5/3/2005 is acknowledged. The traversal is on the ground(s) that undue diverse searching is not required. This is not found persuasive because searching for these 4 different species requires diverse searching and the prior art that is applicable to species I is not necessarily applicable to species II-IV. Applicant can only overcome this assertion by making it clear on the record that the 4 species are obvious variants of each other, which would not require diverse searching.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 3, 6, 7, and 13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5/3/2005.

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 4, 5, and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deter et al. (US 5,822,022) in view of Baba et al. (US 6,626,542.)

Deter teaches in figure 1 a scan type display optical system comprising:

An optical scanning member which deflects and scans light (40); and

A projection optical system (34), wherein

An incidence range of the light from the optical scanning member to a first optical surface on which the light is incident initial out of the plurality of optical surfaces is variable (this is how scanning optical systems inherently work, they scan an image across a optical surface by changing the incidence range and inherently even a single display screen can be considered to comprise multiple display areas; see columns 1 and 2 starting at line 55 of column 1.)

Deter teaches a refractive projection optical system rather than an at least partially reflective system. Baba et al. teaches such a system in figures 1-5 (different embodiments). Baba teaches in column 2 lines 35-52 that reflection type projection optical systems have the advantage over refractive system as taught by Deter in that they

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have less distortion and chromatic aberration. They are also cheaper/easier to make.

Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a reflective projection optical system in the scan type display optical system of Deter as taught by Baba.

With regards to applicant's claim 2:

See above.

With regards to applicant's claims 4 and 5:

As can be seen in figure 1 of Deter the rotating optical member which is the optical scanning member (40) as is claimed in applicant's claim 5, rotates the incidence light about an entrance pupil of the projection optical system (the entrance pupil is the scare outline on the projection lens.)

With regards to applicant's claim 8:

Baba teaches curved surfaces making up the reflective surface.

With regards to applicant's claim 9:

See column 2 line 20-28 of Baba which teaches that the reflective surface have rotationally asymmetric aspheric shape (a free-form is not spherical so it is therefore aspherical.)

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With regards to applicant's claim 10:

Deter teaches a second mirror for deflecting the light in a direction orthogonal to the first direction (38).

With regards to applicant's claims 11 and 12:

See column 7 line 55 through column 8 line 28 of Deter.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 2, 4, 5, and 8-12 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,626,541 in view of Deter et al. (US 5,822,022).

Claim 1 of the '541 patent claims a projection display optical system comprising reflective surfaces which are asymmetrical rotational reflecting surface having curvatures, however the '541 patent does not claim what kind of light engine produces the light to be projected by the projection system. As described above, Deter teaches a

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scan type display optical system (see above for details of that system.) Deter teaches in column 1 lines 55 through column 2 line 20 that the raster scanning laser display system of Deter has advantageous over other prior art display system such as LCDs in that it can use a variety of different standards without degrading the image quality or resolution. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a video display system of the scan type as taught by Deter with the projection optical system of claim 1 of the '541 patent.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 2003/0039036 to Kruschwitz et al. teaches in figure 1 a laser type projection system including scanner 34.

US 6,208,468 to Togino et al. which teaches a reflective optical system in figure 3,

US 2002/0196377 to Furukawa et al. teaches in figure 2A a projection system including mirrors (205 and 207) for deflecting the light and a projection lens (209).

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US 6,670,603 to Shimada et al. teaches in figure 3 a projector utilizing mirrors for deflecting the light.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS



JUDY NGUYEN
ADVISORY PATENT EXAMINER